WHAT IS CLAIMED IS:

1. A compensation apparatus for image scan, applied to an optical scanner that comprises a platform to locate an object to be scanned thereon, a photosensitive apparatus with a set of scan photosensitive devices, and a storage apparatus, wherein a scanned image is obtained and temporarily stored in the storage apparatus after the object is scanned, the compensation apparatus comprising:

a set of calibration boards, having two calibration boards located at two sides of the platform;

a set of calibration photosensitive devices, located at two sides of the set of scan photosensitive devices to obtain a set of calibrated images by detecting the calibration boards; and

an image processor, to extract and compare the calibrated images for adjusting the scanned image.

2. The compensation apparatus according to claim 1, wherein the set of calibration photosensitive devices is formed of a plurality of calibration photosensitive devices arranged in a L×K array at two sides of the set of scan photosensitive devices, and L and K are integers larger than 1.

3. The compensation according to claim 2, wherein the set of scan photosensitive devices is formed of a plurality of scan photosensitive devices, and the calibration photosensitive devices have a dimension smaller than that of the scan photosensitive devices.

4. The compensation apparatus according to claim 1, wherein the calibration boards have a strip shape and a width increasing linearly along a scanning direction.

5. The compensation apparatus according to claim 4, wherein the strip-like calibration boards have trapezium planes.

6. The compensation apparatus according to claim 4, wherein the strip-like calibration boards have triangle planes.

7. The compensation apparatus according to claim 4, wherein the strip-like calibration boards have curved perimeters.

8. The compensation apparatus according to claim 1, wherein the strip-like calibration boards have widths decreasing linearly along a scanning direction.

9. The compensation apparatus according to claim 8, wherein the strip-like calibration boards have trapezium planes.

10. The compensation apparatus according to claim 8, wherein the strip-like calibration boards have triangle planes.

11. The compensation apparatus according to claim 8, wherein the strip-like

calibration boards have curved perimeters.

12. The compensation apparatus according to claim 1, wherein the image processor extracts and compares the calibrated images to calculate an optical path deviation, and magnitude and direction of the optical path deviation are calculated according to pattern proportion and position variations of the calibrated images of the calibration boards detected by the set of calibration photosensitive devices.

13. The compensation apparatus according to claim 12, wherein the method to calculate the optical path deviation includes:

calculating the optical path deviation in x-axis according to position alteration of the calibrated images detected by the set of calibration photosensitive devices;

calculating the optical path deviation in y-axis according to position alteration of the calibrated images detected by the set of calibration photosensitive devices; and

calculating the optical path deviation in z-axis according to position alteration of the calibrated images detected by the set of calibration photosensitive devices.

14. The compensation apparatus according to claim 13, wherein the method to calculate the optical path deviation further includes:

calculating the optical path deviation twisting around y-axis according to the optical path deviation in z-axis; and

calculating the optical path deviation twisting around z-axis according to the optical path deviation in y-axis.

15. A compensation apparatus for image scan, applied to an optical scanner comprising a platform for depositing an object to be scanned thereon, a photosensitive apparatus including a set of scan photosensitive devices, and a storage apparatus, wherein when the object is detected by the set of scan photosensitive devices, a scanned image is obtained and temporarily stored in the storage apparatus, the compensation apparatus comprising:

a calibration board, at one side of the platform;

a set of calibration photosensitive devices, at one side of the set of scan photosensitive devices to obtain a calibrated image by detecting the calibration board; and

an image processor, to extract and compare the calibrated image to adjust the scanned image.

16. The compensation apparatus according to claim 15, wherein the set of calibration photosensitive devices comprises a plurality of calibration photosensitive devices arranged at two sides of the set of scan photosensitive devices in an L×K array, where L and K are integers larger than 1.

17. The compensation apparatus according to claim 15, wherein the set of scan photosensitive devices is formed of a plurality of scan photosensitive devices, and the calibration photosensitive devices have a dimension smaller than that of the scan photosensitive devices.

18. The compensation apparatus according to claim 15, wherein the calibration boards have a strip shape and a width increasing linearly along a scanning direction.

19. The compensation apparatus according to claim 15, wherein the calibration boards have a strip shape and a width decreasing linearly along a scanning direction.

20. The compensation apparatus according to claim 15, wherein the image processor extracts and compares the calibrated image to calculate an optical path deviation, and magnitude and direction of the optical path deviation are calculated according to pattern proportion and position variations of the calibrated image of the calibration boards detected by the set of calibration photosensitive devices.

21. The compensation apparatus according to claim 20, wherein the method to calculate the optical path deviation includes:

calculating the optical path deviation in x-axis according to position alteration of the calibrated image detected by the set of calibration photosensitive devices;

calculating the optical path deviation in y-axis according to position alteration of the calibrated image detected by the set of calibration photosensitive devices; and

calculating the optical path deviation in z-axis according to position alteration of the calibrated image detected by the set of calibration photosensitive devices.

22. The compensation apparatus according to claim 21, wherein the method to calculate the optical path deviation further includes:

calculating the optical path deviation twisting around y-axis according to the optical path deviation in z-axis; and

calculating the optical path deviation twisting around z-axis according to the optical path deviation in y-axis.